Abstract ID : 609

Title : Biomass and energy transfer to baleen whales in the South Atlantic sector of the Antarctic

Category : Ecology

Student : Not Applicable

Preferred Format : Poster Presentation

Abstract : During January and February 2000 the International Whaling Commission and Convention for Conservation of Antarctic Marine Living Resources conducted their first collaborative field program, in the South Atlantic region of the Antarctic Ocean. The primary objective of the expedition was to obtain an up-to-date estimate of krill biomass for the region for CCAMLR krill management purposes, but both commissions regarded this as an ideal opportunity to couple whale sighting surveys with the krill surveys. Line transect sighting surveys were conducted by teams of whale observers onboard three vessels conducting acoustic surveys of krill biomass. There were approximately 17,615 (CV 28.3%) minke whales, 9,366 (CV 27.9) humpback whales, 4,524 (CV 42.37) fin whales and 1,670 (CV 61.67) right whales present within the study area. Consumption rates were estimated by fitting a simple exponential model of daily consumption to body mass, with four direct observations for minke whales (immature and mature, male and female) at the lower end of the range of whale sizes, anchored by maximum daily rates covering a range from 2% to 3% per day at the upper end of the range, for blue whales. Total consumption by baleen whales during the approximately 120 day feeding season was estimated to range between 2,096 million kg and 2,625 million kg, corresponding to 2,305,683 million kcal to 2,887,958 million kcal. Consumption by baleen whales comprised approximately 5% of the estimated standing stock for krill. For a number of reasons this is likely to be biased downward.